

**Tetra Tech, Inc.**

4213 State Street, Suite 100
 Santa Barbara, CA 93110-2847
 VOICE (805) 681-3100 FAX (805) 681-3108

Project: **Vandenberg Air Force Base**Log of Well No. **14-MW-3**
 Location: **OU4, Site 14, approximately 900 ft. southwest
 of Building 1794, west of Watt Road.**

Date Started: 9/29/97 Completed: 10/7/97

Logged By: W. Drake Checked By: K. McNamara, R.G.

Drilled By: B. Carpenter, S/G Testing *KM #6678*

Drilling Equipment: CME 75, 8" and 10" HSA

Sampling Equipment: 2-inch I.D. Split Spoon

GS Elev.: 132.3 ft above MSL TD: 149.0 ft

4" PVC Blank Casing: from 0 ft bgs to 137.5 ft bgs

0.01" Screening Casing: from 137.5 ft bgs to 147.5 ft bgs

Bentonite/Cement Grout: from 2 ft bgs to 133 ft bgs

Bentonite Transitional Seal: from 133 ft bgs to 135 ft bgs

Sand Filter Pack: from 135 ft bgs to 148 ft bgs

TOC Elev.: 134.30 ft above MSL

Depth (ft. bgs)	MATERIAL DESCRIPTION	Material Symbol	Material Type	Well Construction	Sample	Blow Counts per 6"	Percent Recovery	PID (ppm) Amb/Smp	REMARKS
5	sand, dark yellowish brown (10YR 3/4), fine to medium grained, subrounded to rounded, loose, dry, trace fines, dune sand.		SP						Start drilling 1032.
10	yellowish brown (10YR 5/4), very dense, slightly moist.					12 21 27 34	75	0/ 632	Sample V14MW3-10 submitted for chemical tests.
15									
20						12 27	75	0/ 176	

84 ft. bgs. Groundwater depth during drilling 84.28 ft. bgs. Groundwater depth after well development on: 10/24/97

TC Number: A224-02

TETRA TECH, INC.

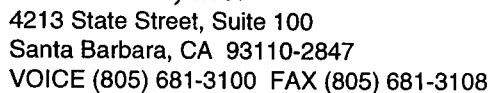
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20	sand, yellowish brown (10YR 5/4), fine to medium grained, subrounded to rounded, very dense, slightly moist, trace fines, dune sand.		SP			40 50			
25									
30	dark yellowish brown (10YR 4/4).					12 27 21 50/4"	60	0/ 85	
35									
40	dense.					13 14 15 21	50	0/ 61	
45									



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70	medium dense, moist.		SP			15			
						19			
75									
80						5			
						8			
						11			
						14			
85							50	0/0	Sample V14MW3-80 sub- mitted for physical tests. Groundwater encountered at 84 ft bgs.
90	silty sand, brown (10YR 4/3), fine grained, poorly graded, subrounded, medium dense, wet, little fines, alluvium.		SM			0			
						4			
						6			
						20			No recovery due to heaving sands. Resume drilling at 0900, 4/30/97.
95						2			
						4	0		

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95			SM			9 20			
100									
105									
110	<u>silty sand</u> , brown (10YR 4/3), fine to medium grained, subrounded to rounded.							0/ 63	Heaving sands. 0900, 10/1/97, Drilling continued without rod. Lithology approx. by soil cuttings.
115	dark grayish brown (10YR 4/2).							0/ 1375	Lithology approx. by soil cuttings.
120									

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120			SM			4 20			
125									
130	dark grayish brown (10YR 4/2).							0/ 202	Lithology based on soil cuttings.
135									
140									
145									

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145	few cherty gravel.		SM						End drilling at 1230, 10/1/97.
	shale, dark grayish brown (10YR 4/2) hard, Monterey Formation.		Shale						Lithology based on drill rate and shale cuttings removed from auger.
150									T.D. of 8 inch pilot hole at 149 ft. Ream hole to 148 ft with 10 inch auger. Heaving sands. Construct 4 inch well using 0.01 inch prepack screen.
155									
160									
165									
170									